

stem sparingly beset with radicles, sparingly branched, branches irregularly pinnate; leaves patent, secund, narrowly elongate, lanceolate, not narrowed to the base, narrowly acuminate; nerve thin, extending to the middle of the leaf; the margin plane, areolæ narrowly hexagonal-linear, broader and shorter at the extreme base, the primordial utricle not conspicuous; inflorescence monœcious; parichætal leaves erecto-patent, leaves few, pale, suddenly acuminate, entire, nerveless; capsule oval, yellowish, arcuate, constricted below the mouth when dry and after the lid has fallen; annulus (?); teeth of the peristome narrowly lanceolate, densely articulated, orange coloured at the base, paler above, teeth nearly entire, ciliæ binate or ternate nodulose.

Observations.—From *Rhyncostegium tenellum*, which it closely resembles in appearance, it is distinguished by its delicate habit, by the nerve not extending beyond the middle of the leaf, and by the rough fruit stalk; from *Rhynch. curvisetum* (Brid.), Lindberg (*Rh. Teesdalii*, Br. eur. et Schpr. Syn. p. pte.; *Hyp. rigidulum*, Bruch.,) by the base of the leaf not being narrowed, and of a longer lancet-shape, by the acuminate apex, by the thinner nerve, and by the areolation of the leaves.

Hab.—Iglesias, in Sardinia (Fr. Mull.), Sierra de Palma, near Algesiras, in Spain (R. Fritze).
E. M. H.

REVISION OF GEOGLOSSUM.

By M. C. COOKE

The species of *Geoglossum* enumerated in the "Handbook," at pp. 662, are imperfectly described in so far as the fruit is concerned. The following revision of these characters will therefore be noted by those who are in possession of that work.

1856. *Geoglossum viride*. *P.*—Asci cylindrico-clavate; sporidia narrowly elliptical, or somewhat lanceolate, obtuse at the ends, hyaline, simple (0.3×0.1 m.m.); paraphyses linear, scarcely thickened at the tips.

1957. *Geoglossum olivaceum*. *P.*—Asci cylindrico-clavate; sporidia narrowly elliptical, obtuse at the ends, hyaline, simple (0.25×0.08 m.m.); paraphyses linear, scarcely incrassated.

1958. *Geoglossum glutinosum*. *P.*—Asci cylindrico-clavate; sporidia cylindrical, straight or curved, 3-septate, brown (0.8 m.m. long); paraphyses filiform, with pyriform tips.

1959. *Geoglossum viscosum*. *P.*—Asci cylindrico-clavate; sporidia cylindrical, straight or slightly curved, 3-septate, brown ($0.9-0.1$ m.m. long); paraphyses filiform, globose at the tips, not septate.

1960. *Geoglossum glabrum*. *P.*—Asci cylindrico-clavate; sporidia cylindrical, straight or slightly curved, 7-septate, brown (0.85–0.9 m.m. long); paraphyses filiform, thickened at the tips, septate, the four ultimate cells oval, concatenate, moniliform.

1961. *Geoglossum hirsutum*. *P.*—Asci cylindrico-clavate; sporidia fasciculate, cylindrical, slightly curved, 15-septate, brown (0.15 m.m. long); paraphyses septate, slightly incrassated at the tips, curved, or circinate.

1962. *Geoglossum difforme*. *Fr.*—Asci cylindrico-clavate; sporidia cylindrical, straight or slightly curved, 7-septate, brown (0.11 m.m. long); paraphyses filiform, very long, septate, flexuous and contorted at the tips.

A species of *Geoglossum* allied to *G. glutinosum* occurs in the United States, the sporidia of which are 15-septate. Another hirsute species has at length been found in Australia (*G. Walteri*); with sporidia shorter than in *G. hirsutum*, and 7-septate. A singular variety of *Geoglossum hirsutum* occurs in the United States which does not exceed an inch in height; the clubs, and indeed the whole plant, is nearly smooth, the bristles which spring from the base of the hymenium are slender, and scarcely longer than the paraphyses; the paraphyses are the same as in *G. hirsutum*, of which it is probably a variety.

It is hoped that coloured figures, with analyses, will be published shortly of all known species of *Geoglossum*, as part of an Atlas of figures of Fungi, which will at first be chiefly devoted to the *Discomycetes*.

ATLAS DER DIATOMACEÆ-KUNDE.

By ADOLPH SCHMIDT.

Archidiaconus in Ascherleben.

Since the publication of Ehrenberg's elaborate work (the "Microgeologie") nothing has appeared to assist the modern student in his labours, excepting papers published in various scientific journals, many of them not now to be obtained. The above-named work, judging from the first part, will be found a valuable addition to the literature of the Diatomaceæ.

The author is assisted by M.M. Gründler, Grunow, Janisch, Weissflog, and Witt—names well known to the student of the Diatomaceæ, names which the author considers will guarantee the accuracy of the figures, of which over 9,000 have been drawn during the past six years. These drawings were for the most part made to a scale of 900 diameters, thus enabling the author to give a greater amount of detail than when the magnification usually adopted, viz., 400 diameters, is employed. The drawings are afterwards reduced